

SPATIAL FILTER FOR SAMPLE INSPECTION SYSTEM

ABSTRACT OF THE DISCLOSURE

Spatial filtering is disclosed that improves the signal to noise ration of a sample inspection
5 system of the type having a detector and collection optics that receive radiation scattered
from a point on a sample surface and direct the scattered radiation toward the detector. The
spatial filtering may screen the detector from substantially all of the forward-scattered
radiation from back-scattered radiation that is scattered in a at an elevation angle less than
about 45° with respect to a normal to the surface. Forward scattered noise is screened from
10 the detector while backscattered signal reaches the detector. Programmable spatial filters
may be used to selectively block scattered noise due to surface roughness while transmitting
scattered signal due to surface defects.